

REMARKS

Claims 1-7, 9-19, 21-28, 31-35, and 64-71 are currently pending. Applicant acknowledges and appreciates the Examiner's indication that claims 22-28 and 31-35 are allowed. Claims 1, 18, and 21 have been amended. Claims 64-71 have been added. New claim 65 depends from allowed claim 22 and as such is also allowable.

The Examiner objected to claims 18 and 21 for various informalities. Applicant has amended claims 18 and 21 to correct the Examiner's objections.

The Examiner rejected claims 1-7, 9-19, and 21 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner argues that the phrase "and second stop in contact with the valve arm" in claim 1 is new matter.

Applicant respectfully disagrees. Fig. 7 of the specification illustrates one construction of the invention that includes a valve arm 60 and a connector member 55. The assembly of Fig. 7 includes a first stop in the form of a shoulder 90 (illustrated in Fig. 4) and a second stop in the form of a lip 135. As illustrated, the shoulder 90 and lip 135 contact the valve arm 60 such that the valve arm 60 is inhibited from movement along the longitudinal axis (shown in Fig. 3) defined by the connector member.

With reference to the specification, the Applicant states that the stops can take forms other than shoulders 90 and proceeds to discuss several examples. *See specification, page 5, lines 14-22.* Applicant further states "[a]ny component or feature that acts to inhibit the free movement of the arms 60, 65 along the length of the connector member 55 can be considered a stop." *Specification, page 5, lines 23-25.* Furthermore, the Applicant describes the lip 135

as being “a portion of the connector member 55 that overlays a portion of the valve arm 60 and prevents its removal from the connector member.” *Specification, page 9, lines 8-10.*

The Applicant further describes the connection between the connector member 55 and the arm 60 with regard to Figs. 8 and 8a. While these figures disclose a non-elected species, the written description is relevant and still forms part of the disclosure. Figs. 8 and 8a illustrate a construction in which the first stop is in the form of a first swage 155 and the second stop is in the form of a second swage 160. The arm 60 is positioned on the connector member 55 until it abuts the first swage 155. *See Specification, page 11, lines 1-2.* The second swage 160 “is then formed above the arm to fix its axial position relative to the connector member 55.” *Specification, page 11, lines 2-3.* To fix the axial position of the arm 60 relative to the connector member, the second swage 160 must contact the arm 60 as illustrated in Fig. 8a.

In light of the foregoing, the phrase “the second stop in contact with the valve arm” is clearly illustrated in Figs. 7 and 8a and is described to a sufficient clarity to allow one of ordinary skill in the art to make and use the invention. As such, Applicant respectfully requests that the Examiner withdraw the rejections under 35 U.S.C. § 112, first paragraph.

The Examiner rejected claims 1-3, 5-6, 12-16, 18, and 21 under 35 U.S.C. §102(e) as being anticipated by Bonde (U.S. Patent No. 6,672,269).

Claim 1 defines a valve-operating lever that includes a connector member and a valve arm that has a first aperture that defines a valve arm engagement portion. A first stop is integrally-formed as part of the connector member to at least partially define a first engagement portion. The valve arm engagement portion engages the first engagement portion. A second stop is integrally-formed as part of the connector member and is positioned

such that the valve arm is sandwiched between the first stop and the second stop. The first stop and second stop are in contact with the valve arm to inhibit movement of the valve arm along a longitudinal axis defined by the connector member.

Bonde does not teach or suggest, among other things, a valve-operating lever that includes a first stop and a second stop that are integrally-formed as part of the connector member. Rather, Bonde discloses a portion of a valve train 460 for an engine 100. The valve train includes push rods that rotate or rock rocker arms 350. Springs 480 and 490 are positioned between a cylinder head 170 and the rocker arms 350 to push the rocker arms in a valve closing direction. The Examiner asserts that the rocker arm 350 is analogous to the valve arm of claim 1. The Examiner also asserts that the push rod 340 and the unnumbered components make up the connector member. It is unclear what components or features of Bonde define a first stop and a second stop. While the illustration and description provided by Bonde are not clear, it appears as though the push rod contacts the bottom surface of the rocker arm 350 and pushes the end of the rocker arm upward. The spring 490 engages the opposite end of the rocker arm 350 and also pushes it upward. Both ends of the rocker arm 350 are movable along the axis defined by the spring 490 and the axis defined by the push rod 340. Thus, there are no stops near the ends of the rocker arm 350 that inhibit movement of the rocker arm along a longitudinal axis, much less a stop that is integrally-formed as part of the connector member. The only area of the rocker arm that is inhibited from movement along an axis defined by the components identified by the Examiner as being analogous to the connector member is near the center of the rocker arm. However, Bonde does not disclose if two stops are present, or if two stops are integrally-formed as part of the unnumbered rod.

In light of the foregoing, Bonde does not teach or suggest each and every limitation of claim 1. As such, claim 1 is allowable. In addition, claims 2-3, 5-6, 12-16, 18, 21, and 64, which depend from claim 1, are allowable for these and other reasons.

The Examiner rejected claims 4 and 17 under 35 U.S.C. §103(a) as being unpatentable over Bonde in view of Okubo (U.S. Patent No. 6,199,527).

Claim 4 and 17 depend from claim 1 and add additional limitations. As discussed with regard to the 35 U.S.C. §102(e) rejections, Bonde does not teach or suggest each and every limitation of claim 1, much less those of claims 4 and 17.

Okubo does not cure the deficiencies of Bonde. Okubo does not teach or suggest, among other things, a valve operating lever that includes a first stop and a second stop positioned to sandwich the valve arm therebetween. In addition, Okubo does not teach or suggest a first stop and a second stop that contact the valve arm to inhibit movement of the valve arm along a longitudinal axis defined by the connector member. Rather, Okubo discloses a valve operating lever that includes a valve arm 113 and a connector member 115. The connector member 115 includes a groove that is caulked or peened to deform the end of the connector member to form a first stop. However, there is no second stop that is in contact with the valve arm. Thus, the valve arm is not in contact with a first stop and a second stop to inhibit movement along the longitudinal axis defined by the connector member, nor is the valve arm 113 sandwiched between a first stop and a second stop.

In light of the foregoing, Bonde and Okubo, alone or in combination, do not teach or suggest each and every limitation of claim 1, much less those of claims 4 and 17. As such, claims 4 and 17 are allowable.

The Examiner rejected claims 7 and 19 under 35 U.S.C. §103(a) as being unpatentable over Bonde in view of Zubeck (U.S. Patent No. 6,550,435).

Claims 7 depends from claim 1 and adds that at least one of the valve arm engagement portion and the first engagement portion includes knurls. Claim 19 depends from claim 1 and adds that at least one of the first engagement portion and the second engagement portion includes a portion having knurls.

As discussed with regard to claim 1, Bonde does not teach or suggest the limitations of claim 1. Zubeck does not cure the deficiencies of Bonde. Zubeck does not teach or suggest a valve-operating lever that includes a first stop and a second stop that are integrally-formed as part of the connector member. Rather, Zubeck discloses an adjustment cam 48 that is press fit, or otherwise secured, to a lash pin 36. There is no mention of a first or a second stop, much less integrally-formed first and second stops.

In light of the foregoing, Bonde and Zubeck, alone or in combination do not teach or suggest each and every limitation of claims 7 and 19. As such, claims 7 and 19 are allowable.

The Examiner rejected claims 9-11 under 35 U.S.C. §103(a) as being unpatentable over Bonde in view of Gracyalny (U.S. Patent No. 6,349,688).

Claims 9-11 depend from claim 1 and add additional limitations. As discussed with regard to claim 1, Bonde does not teach or suggest all of the limitations of claim 1, much less those of claims 9-11.

Gracyalny does not cure the deficiencies of Bonde. Rather, Gracyalny discloses a direct lever system for an engine that includes a connector member. However, there is no teaching or suggestion of a valve arm that includes a first aperture that defines a valve arm engagement portion, and a connector member that includes an integrally-formed first stop that

at least partially defines a first engagement portion that engages the valve arm engagement portion.

In light of the foregoing, Bonde and Gracyalny, alone or in combination do not teach or suggest each and every limitation of claims 9-11. As such, claims 9-11 are allowable.

New claim 66 defines a valve-operating lever that includes a connector member having a first end and a second end that define a longitudinal axis that extends through the first end and the second end. A first stop is positioned on the first end of the connector member and a second stop is positioned on the first end of the connector member. A valve arm is fixed with respect to the connector member and is at least partially positioned between the first stop and the second stop such that the first stop and the second stop cooperate to substantially prevent movement of the valve arm relative to the connector member along the longitudinal axis.

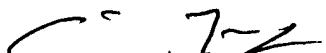
Claim 66 recites a device similar to that shown in Fig. 7 of the specification. None of the reference cited by the Examiner, alone or in combination, teach or suggest all of the limitations of claim 66. Claims 67-71 depend from claim 66 and are also allowable.

CONCLUSION

In light of the foregoing, Applicant respectfully requests entry of the amendment and the allowance of claims 1-7, 9-19, 21-28, 31-35, and 64-71.

The undersigned is available for telephone consultation during normal business hours.

Respectfully submitted,


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